

Remarks

Claims 1-86 are pending in the application. Claims 10-13, 15, 17-20, 22-25, 28-46, 57, 60-64, 66, 67, 69-71, 76, 77, 80, 81, 84, and 85 were withdrawn from consideration. Claims 1-9, 14, 16, 21, 26, 27, 47-56, 58, 59, 65, 68, 72-75, 78, 79, 82, 83, and 86 stand rejected. By this communication, Applicants are amending claims 1, 6, 8, 14, 16, 21, 26, 27, 47, 49, 53, 55, 59, and 75, canceling claim 86, and adding claim 87. Applicants request entry of this Amendment, and request reexamination and reconsideration in view of the remarks contained herein.

Applicants amended claims 8, 14, 16, 21, 26, 27, 49, 55, 56, 59, and 75 to correct antecedent basis errors in view of the amendments to claim 1. Applicants amended claims 6, 14, and 47 to correct some minor errors unrelated to the prior art. Applicants amended claims 1 and 53 to further distinguish the claims from the cited prior art of record. Applicants added claim 87 to further claim the invention.

Before addressing the action on the merits, Applicants continue to disagree with the Office's withdrawal of various claims stating the Applicants' election was made without traverse. As was discussed in the previous response, Applicants disagree with the Office's position, reiterate its original traverse of the restriction, and reserve the right to appeal the Office's position. Applicants had properly traversed the restriction in its response to the restriction and had asserted that the examination of the withdrawn claims can be made without serious burden on the Examiner. Accordingly, Applicants request the Office to withdraw their position that the election was made without traverse.

Amended claim 1 is repeated below for the Examiner's reference.

1. A commercial refrigeration system suitable for use in a supermarket, the commercial refrigeration system comprising:
 - a compressor, a condenser, a valve, a first evaporator coil, and a second evaporator coil, all of which are in fluid communication;
 - a first fixture adapted to be cooled by the first evaporator coil;
 - a second fixture adapted to be cooled by the second evaporator coil;
 - a system controller operable to control operation of the refrigeration system;
 - a subsystem controller in communication with the system controller, the subsystem controller being operable to monitor at least one parameter of a subsystem having at least one of, but not all of, the compressor, condenser, valve, and first fixture,

and being further operable to communicate information relating to the monitored parameter to the system controller and to execute a command from the system controller to affect the operation of the subsystem; and

wherein at least one of the compressor and condenser is located remotely from the first fixture and the second fixture.

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over USPN 5460006 (Torimitsu) in view of USPN 5279458 (DeWolf). With regard to the Torimitsu reference the Office states, "Torimitsu discloses a commercial refrigeration system having compressor, condenser, valve, evaporator coil, fixture cooled by the evaporator coil, system controller 100 and a plurality of subsystem controller 10A-1, 10A-2 ... 10N-4 in digital communication with the system controller for transmitting set point data, detected data and control data." Page 2 of the pending Office action. The Office also states "It is inherent in the system controller of Torimitsu that the controller will have means for input and output to and from the user", and "The condenser of a refrigeration system is inherently located remotely from the fixture since it must discharge heat that the fixture absorbs without sending the discharged heat into the compartment cooled by the fixture". With regard to the DeWolf reference the Office states, "DeWolf teaches the use of a central controller 12 in order to monitor and control a plurality of subsystems 16 over a communication network." Id. Based on the above statements and the general comment that "[it] would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Torimitsu such that it included the use of centralized control of subsystems in view of the teachings of DeWolf," the Office argues claim 1 (and eighteen other claims) are unpatentable in view of the cited prior art. Applicants assert that the Office has not established a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, the examiner must meet three basic criteria. See *MPEP* § 706.02(j) and 2143.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be both found in the prior art, not in applicants' disclosure.

Id.

First, Applicants assert that the references, either alone or combined, do not teach or suggest all the claim limitations of amended claim 1 (i.e., does not meet the third prong of the *prima facie* case). Neither the Torimitsu reference nor the DeWolf reference teaches or suggests a commercial refrigeration system suitable for use in a supermarket having, among the other limitations of claim 1, a compressor, a condenser, a valve, a first evaporator coil (for cooling a first fixture), and a second evaporator coil (for cooling a second fixture), all of which are in fluid communication. In addition, neither the Torimitsu reference nor the DeWolf reference teaches or suggests the commercial refrigeration system including a system controller operable to control operation of the refrigeration system, and a subsystem controller in communication with the system controller, where the subsystem controller is operable to monitor at least one parameter of a subsystem having at least one of, but not all of, the compressor, condenser, valve, and first fixture, and where the subsystem controller is further operable to communicate information relating to the monitored parameter to the system controller and to execute a command from the system controller to affect the operation of the subsystem.

The Torimitsu and DeWolf references disclose networking a plurality of distinct refrigeration systems (i.e., the apparatus generally identified as 10-1 to 10-4 for Torimitsu and the PTACs 16 for DeWolf) to a central device (i.e., the signal receiver 10 for Torimitsu and control system 10 for DeWolf). For Torimitsu, Figs. 1, 4, and 6 clearly show the food storage apparatus 10-1 having distinct refrigerant systems (i.e., elements 12 and 13 for Figs. 1 and 4 and elements 12 and 53 for Fig. 6). See also col. 2, line 66 to col. 3, line 2 (“The food storage apparatus 10-1 to 10-4 each include a cooler or an evaporator 12 disposed within a storage cabinet 11 and a refrigerant circulation device 13 connected to the cooling device 12 as well as in a refrigeration or a freezer); col. 5, lines 44-47; col. 7, lines 24-34 (with emphasis on “the group”). Further, the circuitry 14-19 and 21-24, which Applicants believe the Office asserts is analogous to the subsystem controller, only communicates monitoring information to the signal receiver 10. In other words, the circuitry 14-19 and 21-24, particularly the cooling controller 17, do not execute a command from the signal receiver 10 to affect the operation of the subsystem. See Figs. 1, 4, and 6; col. 3, line 25 to col. 4, line 20; col. 5, lines 35-38; and col. 7, lines 38-41. Applicants do note that Fig. 6 shows a relay 52 separate from circuitry 14-19 and 21-24 being

controlled by the signal receiver 10A. However, the relay 52, if argued to be a controller, does not monitor a parameter of the circulation device 53 and does not communicate information relating to a monitored parameter to the signal receiver 10A. See col. 7, lines 11-51. For the DeWolf reference, Fig. 1 clearly shows the PTACs 16 having distinct refrigerant systems. See also col. 2, lines 47-53. Furthermore, the PTACs 16, which are cited by the Office as being subsystems, are not subsystems as limited in claim 1. Specifically, the subsystems of amended claim 1 are defined as having at least one of, but not all of, the compressor, condenser, valve, and first fixture. Hence, the DeWolf reference does not include a subsystem controller as specified in claim 1.

Therefore, both references disclose networking a plurality of distinct refrigeration systems (i.e., each refrigeration system has a distinct refrigerant system with separate refrigerant charge) to a central device, which is different from the commercial refrigeration system of claim 1. Furthermore, neither reference teaches a subsystem controller in communication with a system controller, where the subsystem is defined as having at least one of, but not all of, the compressor, condenser, valve, and first fixture, and where the subsystem is operable as set forth in claim 1. Accordingly, the Office's proposed combination does not establish a *prima facie* case of obviousness for amended claim 1, and amended claim 1 is allowable.

Before proceeding further, it is noted that the Office appears to argue that the Torimitsu reference discloses a system controller 100 that is in digital communication with a plurality of subsystem controllers 10A-1, 10A2 . . . 10N-4 for transmitting set point data, detected data, and control data between the system controller and the plurality of subsystem controllers. However, Applicants assert the Office is mischaracterizing the Torimitsu reference. Reference numbers 10A-1, 10A-2 . . . 10N-4 refer to distinct refrigeration systems and not to "subsystem controllers." Circuitry 14-19 and 21-24, particularly cooling controller 17, is the closest elements to a "subsystem controller". This distinction is important because the Torimitsu reference discloses a monitoring system for stand-alone food storage devices. More specifically, for the Torimitsu reference, the subsystem controllers (i.e., cooling controllers 17) are not operable to execute a command from the system controller (i.e., administrative computer 100) to

affect operation of the subsystem.¹ Therefore, the Office has mischaracterized the Torimitsu reference in the pending action.

In addition, Applicants take exception to the Office's broad-brush statement that a "condenser of a refrigeration system is inherently located remotely from the fixture since it must discharge heat that the fixture absorbs." See for example page 4 of the pending Office action. Contrary to the Office's assertion, most home refrigerators and home freezers, for example, support a complete refrigerant system. Similarly, the PTACs of the DeWolf reference clearly support the refrigerant system 22-30, and Figs. 1 and 4 of the Torimitsu reference schematically show the refrigerant system 12, 13 being supported by the apparatus 10-1. Therefore, it is not inherent for a condenser of a particular refrigeration system to be located remotely from the fixture. That being said, Applicants previously mischaracterized the Torimitsu reference by stating that the Torimitsu reference does not show at least one of the compressor and condenser being located remotely from the fixture. See Fig. 6 which shows a construction where a portion of the refrigerant system is located remotely from the fixture. Therefore, Applicants recant this statement from its previous response.

Applicants also assert that the Office has not established the other two prongs of the *prima facie* case of obviousness, and therefore has not met its duty with respect to the obviousness rejection. *Id.* The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventors have done. *MPEP* § 706.02(j); *see also In re Rougget*, 149 F.3d 1350, 1355 (Fed. Cir. 1998). To this end, the requisite motivation must stem from some teaching, suggestion, or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art, and not from Appellant's disclosure. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 U.S.P.Q.2d 1434, 1439 (Fed. Cir.),

¹ For the construction shown in Fig. 1, the signal receiver 10 only monitors signals from the apparatus 10-1 to 10-4, and the cooling controller 17 receives inputs from only the setting device 14 and the sensors 15 and 16. Figs. 3 and 4 disclose multiple signal receivers in communication with an administrative computer/center. Similar to Fig. 2, the signal receiver 10 only monitors signals from the apparatus 10A-1 to 10A-4 and the cooling controller 17 receives inputs from only the setting device 14 and the sensors 15 and 16. Fig. 6 discloses a construction where the signal receiver 10 includes a control signal output circuit that directly controls the evaporator 12 of the storage cabinet 11. Additionally, the signal receiver 10 monitors signals from the apparatus 10-1 to 10-4. The "cooling controller" 17 does not receive a fixture control signal over the communication channel and does not control the evaporator 12 or the storage cabinet 11 (i.e., it only provides a local alarm).

cert. denied, 488 U.S. 825 (1988); *In re Vaeck*, 947 F.2d at 493, 20 U.S.P.Q.2d at 1442; MPEP §2143. The Examiner has not done this. For example, Applicants assert there is no motivation in the cited prior art of record to combine the monitoring system for food storage devices, as taught in the Torimitsu reference, with the heating and air conditioning system for heating and cooling a multi-space building (e.g., a hotel), as taught in the DeWolf reference. The mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984); *In re Mills*, 916 F.2d 680, 682, 16 U.S.P.Q.2d 1430, 1432 (Fed. Cir. 1990); MPEP §2143.01. Hindsight based on the applicant's disclosure cannot be used to establish an obviousness rejection. See MPEP §2142. See also *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546 (Fed. Cir. 1998) ("Determination of obviousness can not be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention.")

Moreover, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d at 902, 221 U.S.P.Q. at 1127; MPEP §2143.01. The only embodiment of the Torimitsu reference that arguably shows a subsystem controller for controlling a subsystem as specified in claim 1 is the third embodiment. However, the signal receiver 10A (in Fig. 6) controls the relay 52, which is separate from the circuitry 14-19 and 21-24, to control the refrigerant circulation device 53. The PTACs 16 of the DeWolf reference at least inherently include a local controller for controlling the refrigerant systems. However, these local controllers are not subsystem controllers as discussed earlier. Modifying the third embodiment of the Torimitsu reference with the local controller of the DeWolf reference would render the Torimitsu reference unsatisfactory for its intended purpose since the DeWolf reference discloses the relay 52 and recirculation device 53 separate from the apparatus 10A-1. Accordingly, claim 1 is allowable for reasons other than the failing of the cited prior art to teach each and every limitation of amended claim 1.

Claims 2-77 depend, either directly or indirectly, from claim 1, and consequently, include patentable subject matter for the reasons set forth above with respect to claim 1. Therefore,

claims 2-77 are allowable. Further, Applicants assert claims 2-77 specify additional limitations that, in combination with claim 1, are believed to be separately patentable.

Applicants traverse the rejection of claims 5-8, 16, 21, 26, 27, 47, 50-53, 65, 68, 72, 73, and 75 because the Office has not clearly set forth its reasoning for rejecting these claims. By way of example, claim 26 recites that the subsystem controller executes a command from the system controller to perform one of an anti-sweat function associated with the fixture, a defrost cycle associated with the fixture, and a light control associated with the fixture. The Office has not established a *prima facie* case of obviousness for claim 26. Rather, the Office only summarily rejected claim 26 when asserting its position with respect to claim 1. This reasoning applies to other claims that depend from claim 1. Accordingly, Applicants traverse the rejection of claims 5-8, 16, 21, 26, 27, 47, 50-53, 65, 68, 72, 73, and 75.

It is also noted that the Office improperly rejected claim 50, which depends from claim 49 and not from claim 1.

Claims 3, 14, 49, 55, 56, 58, and 59 are rejected as being unpatentable over the Torimitsu reference in view of the DeWolf reference, and further in view of Official notice. The Office appears to acknowledge that the Torimitsu and DeWolf references, either alone or in combination, do not teach or suggest all of the limitations of claims 3, 14, 49, 55, 56, 58, and 59. Instead, the Office took Official Notice that the control of compressors, condensers, and pressure regulation valves are all well known and conventional in the refrigeration system art. Applicants traverse the Office's use of Official Notice and the rejection. Applicants remind the Examiner that 3, 14, 49, 55, 56, 58, and 59 depend from at least claim 1, and therefore, the limitations of claims 3, 14, 49, 55, 56, 58, and 59 cannot be read in a vacuum. The mere fact that the control of compressors, condensers, and pressure regulation valves are all well known does not result in claims 3, 14, 49, 55, 56, 58, and 59 being unpatentable over the Torimitsu reference in view of the DeWolf reference and further in view of Official Notice. Applicants remind the Office that "determination of obviousness can not be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention." *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546 (Fed. Cir. 1998). The initial burden is on the Office to provide some suggestion of the desirability of doing what the inventors have done. *M.P.E.P.* § 706.02(j);

see also *In re Rougget*, 149 F.3d 1350, 1355 (Fed. Cir. 1998) (“To reject claims in an application under section 103, an examiner must show an un rebutted *prima facie* case of obviousness In the absence of a proper *prima facie* case of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent.”) Since the Office has not established a *prima facie* case of obviousness, claims 3, 14, 49, 55, 56, 58, and 59 are allowable.

Please note that Applicants have previously traversed the Office’s use of Official Notice.

Claim 78 is repeated below for the Examiner’s reference.

78. A method of installing an aspect of a commercial refrigeration system comprising

- a compressor, a condenser, a valve, and an evaporator coil, all of which are in fluid communication,
- a fixture adapted to be cooled by the evaporator coil,
- a system controller operable to control operation of the refrigeration system including providing a command, and
- a subsystem controller in communication with the system controller, the subsystem controller being operable to control operation of a subsystem of the refrigeration system in response to the command, the subsystem including at least one of the compressor, condenser, valve, and fixture, the method comprising:
 - installing the system controller at a first location;
 - installing the subsystem controller at a second location;
 - connecting a source of electrical power to the system controller;
 - installing a power and communication line between the system controller and the subsystem controller;
 - during operation of the refrigeration system,
 - communicating the command from the system controller to the subsystem controller over the power and communication line;
 - transmitting power from the system controller to the subsystem over the power and communication line concurrently with communicating the command; and
 - transmitting power from the system controller to the subsystem over the power and communication line nonconcurrently with communicating the command.

Claim 78 stands rejected as being unpatentable over the Torimitsu reference in view of the DeWolf reference, and further in view of the Douglass reference. Applicants assert that neither the Torimitsu reference nor the DeWolf reference teaches or suggests a method of installing an aspect of a commercial refrigeration system comprising the acts of, among other

acts, communicating the command from the system controller to the subsystem controller over the power and communication line, transmitting power from the system controller to the subsystem over the power and communication line concurrently with communicating the command, and transmitting power from the system controller to the subsystem over the power and communication line nonconcurrently with communicating the command. Rather, the Office would appear to argue that the Douglass reference cures the deficiencies of the Torimitsu and DeWolf references.

Applicants assert that the Douglass reference does not teach or suggest the just-recited limitations. Instead, the cited text by the Office recites a parasitically powered electronic device, which is powered only when the data goes to a high voltage. However, amended claim 78 recites transmitting power concurrently and nonconcurrently with the command. Accordingly, the Douglass reference does not cure the deficiencies of the Torimitsu reference, and claim 78 is allowable.

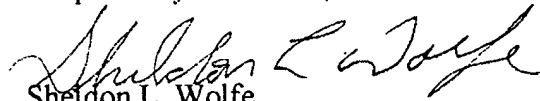
Claims 79-85 and 87 depend, either directly or indirectly, from claim 78, and consequently, include patentable subject matter for the reasons set forth above with respect to claim 78. Therefore, claims 79-85 and 87 are allowable. Further, Applicants assert claims 79-85 and 87 specify additional limitations that, in combination with claim 78, are believed to be patentable.

Applicants traverse the rejection of claims 79, 82, and 83 because the Office has not clearly set forth its reasoning for rejecting these claims. By way of example, claim 79 recites that no separate power line for the subsystem controller must be wired upon installation of the commercial refrigeration system. The Office has not established a *prima facie* case of obviousness for claim 79. Rather, the Office only summarily rejected claim 79 when asserting its position with respect to claim 78. This reasoning applies to other claims that depend from claim 78. Accordingly, Applicants traverse the rejection of claims 79, 82, and 83.

Conclusion

Entry of the Amendment and allowance of the pending claims is respectfully requested.
The undersigned is available during normal business hours if a telephone conversation would be helpful to advance prosecution in this application.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Sheldon L. Wolfe".

Sheldon L. Wolfe

Reg. No. 43,996

Docket No. 047177-9060
Michael Best & Friedrich LLP
100 East Wisconsin Avenue
Suite 3300
Milwaukee, Wisconsin 53202-4108
414.271.6560